ABSTRACT

An apparatus and method for increasing the data storage capacity of a data storage device 100 having media surfaces 23. One or more of a linear density of data, a track density of data, or an error code level of data, is selected for a portion 35 of a media surface 23. Data is recorded on the portion 35 of the media surface 23 at the selected linear density, track density, or error code level. Thereafter, the recorded data is read and an error rate of the recorded data is derived, directly or indirectly. The derived error rate is compared to an acceptable error rate, and if the derived error rate is greater than the acceptable error rate, the previous steps are repeated for another linear density, track density, or error code level, until the derived error rate is less than or equal to the acceptable error rate, to provide a recordable linear density, track density, or error code level of data for the media surface 23.